ELSEVIER

Volume 485, Numbers 1–2, January 11, 1995

Journal of Organometallic Chemistry

# Contents

*Annual Review*

Bismuth Annual review covering the year 1991
G.O. Doak and L.D. Freedman (Raleigh, NC, USA) . . . . . 1

*Regular Papers*

Synthesis and characterization of new one-carbon-bridged titanocene and zirconocene derivatives
R. Fierro, M.D. Rausch (Amherst, MA, USA), G.S. Herrman and H.G. Alt (Bayreuth, Germany) . . . . . 11

First example of selenium transfer reaction of primary selenoamides and selenourea. Novel synthesis of dialkyl diselenides from alkyl halides
M.-D. Ruan, H.-R. Zhao, W.-Q. Fan and X.-J. Zhou (Zhejiang, China) . . . . . 19

Synthesis and characterization of Fe(1-$Me_3Si$-3-$CH_3C_5H_5)_2$, an open ferrocene derived from an unsymmetric pentadienyl ligand
W. Trakarnpruk, A.M. Arif and R.D. Ernst (Salt Lake City, UT, USA) . . . . . 25

Formation constants of some phosphine and phosphite adducts of ($\eta^5$-cyclopentadienyl) (substituted 1,2-ethylenedichalcogenolato)cobalt-(III) complexes and their $^1H$, $^{13}C$ and $^{31}P$ NMR spectra
M. Kajitani, A. Igarashi, H. Hatano, T. Akiyama, A. Sugimori, S. Matsumoto, Y. Iguchi (Tokyo, Japan), H. Boennemann (Mulheim an der Ruhr, Germany), K. Shimizu and G.P. Satô (Tokyo, Japan) . . . . . 31

Synthesis of a tris(pyrazolyl)borate-stabilized molybdenum alkylidene and its hydrolysis products. Crystal structures of TpMo($CH_2C(Me)_2$-Ph)(NAr)(O) and [TpMo(NAr)(O)]$_2$O
W.M. Vaughan, K.A. Abboud and J.M. Boncella (Gainesville, FL, USA) . . . . . 37

Organotin(IV) polypyrazolylborates. VII. Hydridotris (3,4,5-trimethyl-1*H*-pyrazol-1-yl)borates. X-ray crystal structures of K[HB(3,4,5-$Me_3Pz)_3$] and [HB(3,4,5-$Me_3Pz)_3$ $SnMeCl_2$]
G. Gioia Lobbia (Camerino, Italy), P. Cecchi (Viterbo, Italy), R. Spagna, M. Colapietro, A. Pifferi (Roma, Italy) and C. Pettinari (Camerino, Italy) . . . . . 45

Syntheses of cyclohexenone derivatives by the ruthenium complex-catalysed reactions of allylic compounds with $\beta$-keto esters
S.-W. Zhang, T. Mitsudo, T. Kondo and Y. Watanabe (Kyoto, Japan) . . . . . 55

Reactivity of dichlorosilanes with lithium ester enolates: synthesis of 3,3-disubstituted 3-silaglutarates
A. Djerourou and L. Blanco (Orsay, France) . . . . . 63

Hydroxylamines as new decarbonylating reagents in the synthesis of metal carbonyl derivatives
V.A. Maksakov and V.A. Ershova (Novosibirsk, Russian Federation) . . . . . 69

Surprisingly facile decomposition of the dication [($C_5Me_5$)Ir(MeO–$C_6H_4$–$CH_2CO_2\overline{NCOCH_2CH_2CO}$)]$^{2+}$: a metal-mediated Hunsdiecker reaction of a succinimidyl ester?
H. El Amouri, M. Gruselle, J. Vaissermann (Paris, France), M.J. McGlinchey (Hamilton, Canada) and G. Jaouen (Paris, France) . . . . 79

Vinyliden-Übergangsmetallkomplexe. XXX. Reaktionen von Acetato- und Trifluoracetato-Rhodium(I)-Komplexen mit 1-Alkinen: Ein Beispiel für die Balance zwischen isomeren $\pi$-Alkin-, Alkinyl(hydrido)- und Vinyliden-Metallverbindungen
M. Schäfer, J. Wolf und H. Werner (Würzburg, Deutschland) . . . . . 85

Synthesis and structure of triphenylmethyl derivatives of ytterbium [$Yb(THF)_6]^{2+}[Ph_3C]^-_2$ and [$(THF)_4Yb(\mu$-Cl)$_2$Yb(THF)$_4]^{2+}$ [$Ph_3Cl]^-_2$
L.N. Bochkarev, N.E. Molosnova, L.N. Zakharov, G.K. Fukin (Nizhny Novgorod, Russian Federation), A.I. Yanovsky and Y.T. Struchkov (Moscow, Russian Federation) . . . . . 101

Mono-, bi- and polynuclear complexes of diphenylmethane with Cr, Co and Ru. Synthesis and investigation by $^1H$, $^{13}C$ and $^{17}O$ NMR
E. Kolehmainen, K. Laihia, J. Korvola (Jyväskylä, Finland), V.S. Kaganovich, M.I. Rybinskaya and Z.A. Kerzina (Moscow, Russia) . . . 109

Mononuclear($\eta^6$-arene)ruthenium(II) and ($\eta^5$-pentamethylcyclopentadienyl)rhodium(III) and binuclear ruthenium(II)–platinum(II) and ruthenium(II)–rhodium(I) complexes containing 2-(diphenylphosphino)pyridine
D. Drommi, C.G. Arena, F. Nicolò, G. Bruno and F. Faraone (Messina, Italy) . . . . . 115

Reaction of $(CO)_5W(THF)$ with triphenylmethyl azide and triptycyl azide
S.T. Massey, B. Mansour and L. McElwee-White (Stanford, CA, USA) . . . . . 123

Tris(2,6-dimethoxyphenyl)borane and its adducts
M. Wada, M. Kanzaki, H. Ogura, S. Hayase and T. Erabi (Tottori, Japan) . . . . . 127

Molekül- und Kristallstruktur von $\mu$–Hydroxy-cyclooctadien(1,5)-rhodium(I)-Dimer bei 173 K. Zur Reaktion von [($\mu$–OH)Rh(COD-1,5)]$_2$ mit [$\eta^5$–$C_5(CH_3)_5]_2Ti(IV)(CH_3)_2$ und ($\eta^5$–$C_5H_5)_2Ti(II)[P(CH_3)_3]_2$
D. Selent und M. Ramm (Berlin, Deutschland) . . . . . 135

Synthesis and characterization of aryl bismuth compounds using 2,4,6-triphenylphenyl as a bulky ligand
X.-W. Li, J. Lorberth, W. Massa and S. Wocadlo (Marburg, Germany) . . . . . 141

Synthesis and crystal structure of E.O. Fischer's "red crystalline modification of tris-cyclopentadienylbismuth, ($^1h$-$C_5H_5)_3Bi$"
J. Lorberth, W. Massa, S. Wocadlo, I. Sarraje, S.-H. Shin and X.-W. Li (Marburg, Germany) . . . . . 149

Synthesis and characterization of new alkoxide and aryloxide derivatives of titanium and zirconium. X-ray molecular structure of [$ZrCp_2(OC_6F_5)_2$]
J.I. Amor, N.C. Burton, T. Cuenca, P. Gómez-Sal and P. Royo (Alcalá de Henares, Spain) . . . . . 153

Crystal and molecular structure of [1-[(4-chlorophenyl)imino]ethyl] ferrocene and a structural comparison with its cyclometallated derivatives
Y.J. Wu, S.Q. Huo (Zhengzhou, China) and Y. Zhu (Lanzhou, China) . . . . . 161
Synthesis, crystal structures and magnetic properties of salts containing bis[hydrotris(3,5-dimethyl-1-pyrazolyl)borate]iron(III)
S.J. Mason, C.M. Hill, V.J. Murphy, D. O'Hare and D.J. Watkin (Oxford, UK) . . . . . 165
Synthesis of highly crowded cyclopentadienes via reactions of $Cp_2Ni$ and $CpSn(CH_3)_3$ with triarylmethylhalogenides. Molecular structure of 1-$(CH_3)_3Si$–(3-$Ph_3C$)–$C_5H_4$
K.A. Rufanov, N.B. Kazennova, A.V. Churakov, D.A. Lemenovskii and L.G. Kuz'mina (Moscow, Russian Federation) . . . . . 173
Polysulfonylamine. LX. Ein dimeres Diorganozinnhydroxid mit einer Zinn-Stickstoff-Bindung: Bildung und Röntgenstrukturanalyse von Di-$\mu$-hydroxo-bis[(dimesylamido-*N*)dimethylzinn(IV)]
I. Lange, P.G. Jones und A. Blaschette (Braunschweig, Deutschland) . . . . . 179
Aurated clusters derived from ($\mu_3$-ketenylidene)-$Fe_3$ and -$Fe_2Co$ clusters
C. Thöne and H. Vahrenkamp (Freiburg, Germany) . . . . . 185
The heteronuclear cluster chemistry of the Group IB metals. Part XVII. Synthesis and X-ray crystal structure of the hexanuclear mixed-metal cluster $[Ag_2Ru_4(\mu_3\text{-}H)_2(CO)_{12}\{P(C_6H_4Me\text{-}2)_3\}_2]$. An investigation of the steric properties of the $P(C_6H_4Me\text{-}2)_3$ ligand
P.J. McCarthy, I.D. Salter (Exeter, UK) and T. Adatia (London, UK) . . . . . 191
Ferrocenyl salts as synthons: new ferrocenyl-1,3-diketones
C.M. Zakaria, C.A. Morrison, D. McAndrew, W. Bell and C. Glidewell (St. Andrews, Fife, UK) . . . . . 201
Dicarbonylbis[2-(diphenylphosphino)-*N,N*-dimethylethanamine]bis[$\mu$-(2-methyl)-2-propanethiolato]dirhodium and dicarbonylbis[2-(diphenylphosphino)-*N,N,N*-trimethylethanaminium]bis[$\mu$-(2-methyl)-2-propanethiolato]dirhodium tetraphenylborate. Their syntheses, characterization and application as hydrogenation catalyst
H. Schumann, H. Hemling (Berlin, Germany), N. Goren and J. Blum (Jerusalem, Israel) . . . . . 209
He(I) photoelectron spectroscopic study of half- and bent sandwich tetrahydroborates
A. Nagy, L. Szepes, G. Vass and L. Zanathy (Budapest, Hungary) . . . . . 215
Reactions of diacetylene ligands with trinuclear clusters. I. Reactions of 2,4-hexadiyne-1,6-diol and its dicobalthexacarbonyl derivatives with $H_2Os_3(CO)_{10}$
M.G. Karpov, S.P. Tunik, V.R. Denisov, G.L. Starova, A.B. Nikol'skii (St. Petersburg, Russia), F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov (Moscow, Russia) . . . . . 219
Beiträge zur Chemie organometallischer metallacyclischer Nebengruppenmetallverbindungen. XI. Synthese und Charakterisierung von $[Li(TMEDA)]_2Ni(CH_2CH_2CH_2CH_2C(O)O)_2$ und seine Umsetzung mit $CH_3I$ und einem $C_{22}$-Steroidiodid
R. Wyrwa, H.-O. Fröhlich und R. Fischer (Jena, Deutschland) . . . . . 227
Synthese und Eigenschaften funktioneller Polysilane: Die Tetrasilane $MeSi(SiMe_2X)_3$ und Hexasilane $(Me_2XSi)_2MeSiSiMe(SiMe_2X)_2$, X = Me, H, F, Cl, Br, I
G. Kollegger und K. Hassler (Graz, Österreich) . . . . . 233
Comparative studies in the $Cp_2M(\eta^2\text{-}S_2)H$ series (Cp = t-$BuC_5H_4$, $C_5Me_4Et$; M = Nb, Ta) on the reactivity of hydride and disulfide ligands
J.-C. Leblanc, C. Moise, F. Volpato (Dijon, France), H. Brunner, G. Gehart, J. Wachter (Regensburg, Germany) and B. Nuber (Heidelberg, Germany) . . . . . 237
Mehrfachbindungen zwischen Übergangsmetallen und Hauptgruppenelementen. CXXXIV. $^{17}O$-NMR-Spektroskopie an Organorhenium(VII)-oxiden
W.A. Herrmann, F.E. Kühn und P.W. Roesky (Garching b. München, Deutschland) . . . . . 243
Reactions of dodecacarbonyltriruthenium with enones: $\eta^3$-coordinated dihydropyranyl rings
L.V. Rybin, S.V. Osintseva, M.I. Rybinskaya, F.M. Dolgushin, A.I. Yanovsky and Yu.T. Struchkov (Moscow, Russia) . . . . . 253
Bimetallic siloxane cluster of higher valent transition metals: $Na\{[\eta^6\text{-cyclo-}(PhSiO_2)_6]_2Co_2Ni_4(\mu_6\text{-}Cl)\}$
G. Gavioli, R. Battistuzzi, P. Santi, C. Zucchi, G. Pályi (Modena, Italy), R. Ugo (Milan, Italy), A. Vizi-Orosz (Veszprém, Hungary), O.I. Shchegolikhina, Yu.A. Pozdniakova, S.V. Lindeman and A.A. Zhdanov (Moscow, Russia) . . . . . 257

*Preliminary Communications*
Severe distortion of $\pi$-allyl orientation in a Molybdenum complex containing a sterically demanding ligand: Crystal structure of Hydrotris(3,5-dimethylpyrazolyl)borato-($\pi$-cinnamyl)-dicarbonyl molybdenum(II)
V.S. Joshi, K.M. Sathe, M. Nandi, P. Chakrabarti and A. Sarkar (Pune, India) . . . . . C1
Synthesis and structural investigation of lanthanide organometallics involving cyclopentadienyl and 2-naphthoyltrifluoroacetonato chelate ligands
F. Shen, J. Hu, M. Xie, S. Wang (Anhui, China) and X. Huang (Fujian, China) . . . . . C6
Triosmium carbonyl cluster derivatives containing pentameric phenyl cyclopolyphosphine
H.-G. Ang, S.-G. Ang, W.-L. Kwik and Q. Zhang (Singapore, Singapore) . . . . . C10
Structure expansion of the mixed-metal dicarbide cluster core in $[(\mu_3\text{-}C{\equiv}C\text{–}Fp)Ru_3(\mu\text{-}H)(CO_9)]$ via direct radical and thermal coupling reactions leading to higher-nuclearity $(\mu\text{-}C_2H_x)M_y$ cluster compounds ($x = 0, 1$; $y = 7, 8$), $CpFeRu_6(\mu_5\text{-}C_2)(\mu_5\text{-}C_2H)(CO)_{16}$, $Cp_2Fe_2Ru_5(\mu_5\text{-}C_2)_2(CO)_{17}$ and $Cp_2Fe_2Ru_6(\mu_6\text{-}C_2)_2(CO)_{17}$
M. Akita, H. Hirakawa, M. Tanaka and Y. Moro-oka (Yokohama, Japan) . . . . . C14
*Ansa*-[(2,2-bis-$\eta$-cyclopentadienyl)propane]-molybdenum and -tungsten chemistry and related studies
L. Labella, A. Chernega and M.L.H. Green (Oxford, UK) . . . . . C18
*Book Reviews* . . . . . C22
*Conference Calendar* . . . . . C25
*Author Index* . . . . . C27
*Subject Index* . . . . . C29

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. A leaflet describing our requirements is available from the publisher upon request.